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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/360,440	07/26/1999	ROBERT M. CRAIG	MS140696.1/4	4197

7590 02/24/2005

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EXAMINER

TO, BAOQUOC N

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/360,440	CRAIG, ROBERT M.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Baoquoc N To	2162	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-7 and 15-42 is/are pending in the application.
- 4a) Of the above claim(s) ~~1-3,5-7 and 15-42~~ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7 and 15-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Request For Continued Examination***

1. The request filed on 01/07/2005 for a Request For Continued Examination (RCE) under 37 CFR 1.53(d) based on parent Application No. 09/360,440 is acceptable and a RCE has been established. An action on the RCE follows.

2. Claims 1, 17 and 29 are amended, claims 4 and 8-14 are canceled and claims 33-42 are newly added in amendment filed on 01/07/05.

### ***Claim Objections***

3. Claim 29 is objected to because of the following informalities: please remove semi-colon. Appropriate correction is required.

Claim 3 is objected to because of the following informalities: vtable is not understand by the examiner is being interprets as table. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 5-7 and 15-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Lei et al. (US. Patent No. 6,487,552 B1).

Regarding on claim 1, Lei teaches computer program storage medium readable by a computing system and encoding a computer program for executing a computer process providing access to configuration information sourced by at least one datastore, the computer process comprising:

receiving a call to a first table-oriented method with at least one input parameter (receive the query access the t table) (col. 14, lines 6-7);

instantiating a first level table object, in accordance with the at least one input parameter, the first level table object including a first table-oriented interface having a first table-oriented method, and the first level table object providing domain-specific access (in response to receiving a query that accesses table t1, the database server 212 invokes a policy function that has been bound to table t) (col. 14, lines 6-8);

executing a logic component module of the first level table object (the database server 112 invokes a policy function that has been bound to table t) (col. 14, lines 6-8);

providing domain specific logic of the logic component module responsive to the call received by the first level table object that modifies the operation of the call according to the domain-specific access (the policy function then selectively adds one or more predicates to the received query) (col. 14, lines 8-10); and

delegating the call to a corresponding table-oriented method of a lower-level table object to which the first level table object is bound, if the first level table object depends on the lower-level table object to completely service the call (the policy

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function that is bound to a table is invoked when a query accesses data in the table, regardless of the access path used by the query. For example, a particular query may retrieve data through a first view, where the first view retrieves data through second view, where the second view retrieves data from table t. Under these conditions, the database server will determine that table t is being accessed at the time the particular query is being parsed. Upon detecting that table T is being accessed, the database server invokes the policy function that is bound to table t) (col. 15, lines 23-33).

Regarding on claim 2, Lei teaches the computer program storage medium recited in claim 1 wherein the lower-level table object supports a second table-oriented interface identical to the first table-oriented interface of the first level table object (col. 15, lines 23-32).

Regarding on claim 5, Lei teaches the computer program storage medium recited in claim 1 wherein the operation for executing the domain-specific logic comprises:

Enforcing complex relationships between a first column and a second column of a logic level table presented to a caller by the first level table object before the datastore is updated (col. 17, lines 22-26).

Regarding on claim 6, Lei teaches the computer program storage medium recited 1 wherein the operation for executing the domain-specific logic comprises:

Enforcing complex relationships between a first column and a second column of a logic level table presented to a caller by the first level table object before the datastore is updated (col. 17, lines 22-26).

Regarding on claim 7, Lei teaches the computer program storage medium recited in claim 1 wherein the operation for executing the domain-specific logic comprises:

Filtering the configuration information accessible by a caller depending on a security level associated with the caller (col. 16, lines 28-30).

Regarding on claim 15, Lei teaches the computer program storage recited in claim 1 wherein the computer process further comprises:

Caching read data from the lower-level table object in a read cache of the first level table object (col. 17, lines 62-64).

Regarding on claim 16, Lei teaches the computer program storage medium recited in claim 1 wherein the computer process further comprises:

Caching read data intend for the lower-level table object in a write cache of the first level table object (col. 17, lines 62-64).

Regarding on claim 17, Lei teaches a logic table object, executable by a computer, providing domain-specific access to configuration information sourced by at least one datastorage, the access being substantially specified by at least one input parameter, the logic table object comprising:

A table-oriented interface including a table-oriented method accessible by a caller to access configuration information and receiving a call from the caller to the table-oriented method (in response to receiving this information stored procedure 250 determine whether the myapplication, application\_state, and language attributes are attributes that user 210 is allowed to set) (col. 10, lines 65-67 to col. 11, lines 1-2);

A logic component module providing domain-specific logic to the table-oriented method (the database server 112 invokes a policy function that has been bound to table t) (col. 14, lines 6-8);

A domain specific logic of the logic component module, responsive to the call received by the caller, and operable to modify the operation of the call according to the domain-specific access (in response to receiving a query that accesses table t1, the database server 212 invokes a policy function that has been bound to table t) (col. 14, lines 6-8); and

An interception/delegation module executing the domain-specific logic of the logic component module, responsive to receipt of the call, and further operable to delegate the call to a corresponding table-oriented method of a lower-level table object to which the logic table object is bound, if the logic table object depends on the lower-level table object to completely service the call (the policy function that is bound to a table is invoked when a query accesses data in the table, regardless of the access path used by the query. For example, a particular query may retrieve data through a first view, where the first view retrieves data through second view, where the second view retrieves data from table t. Under these conditions, the database server will determine that table t is being accessed at the time the particular query is being parsed. Upon detecting that table T is being accessed, the database server invokes the policy function that is bound to table t) (col. 15, lines 23-33).

Regarding on claim 18, Lei teaches the logic table recited in claim 17 wherein the logic component module includes a mapping module for translating a first coordinate of

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a logic level table presented by the logic table object to a second coordinate in a lower-level table presented to the logic table object by the lower-level table object (col. 15, lines 23-32).

Regarding on claim 19, Lei teaches the logic table of claim recited in claim 18 wherein the logic component module includes a mapping lookup table having entries corresponding to coordinates of the logic level table, one or more of the entries including mapping instructions to corresponding coordinates in the lower-level table (col. 15, lines 23-32).

Regarding on claim 20, Lei teaches the logic table object recited in claim 17 wherein the logic component module includes a supplement logic module having domain specific logic to supplement functionality of the lower-level table object, responsive to the call received by the logic table object (col. 16, lines 6-20).

Regarding on claim 21, Lei teaches the logic table object of claim 20 wherein the supplemental logic module triggers an external operation, responsive to the call (col. 16, lines 6-20).

Regarding on claim 22, Lei teaches the logic table object of claim 17 wherein the logic component module includes a synthesizing module synthesizing data associated with a first coordinate in a logic level table presented to the caller by the logic table object, wherein no corresponding coordinate exists in a lower-level table presented by the lower-level table object (synthesizing operation is the same modifying the query based on the detecting the query (col. 21, lines 55-62).



Regarding on claim 23, Lei teaches the logic table of claim 17 wherein the table-oriented interface supported by the logic table object is identical to a second table-oriented interface supported by the lower-level table object to which the logic table object is bound (col. 1, lines 23-32).

Regarding on claim 24, Lei teaches the logic table of claim 17 further comprising a first field storing a first pointer to the lower-level object, the pointer being usable to access to a lower-level table-oriented method of the lower-level table object (col. 15, lines 23-32).

Regarding on claim 25, Lei teaches the logic table of the claim 24 further comprising a second field storing a second pointer to another lower-level table object, and wherein the logic component module comprises a mapping module translating a first coordinate of a logic level table presented by the logic table object to a second coordinate in a lower-level table presented to the logic table object by on the lower-level table objects (col. 15, lines 23-32).

Regarding on claim 26, Lei teaches the logic table of claim 17 further comprising:

A read cache for caching data received from the lower-level table object (col. 17, lines 62-64).

Regarding on claim 27, Lei teaches the logic table of claim 17 further comprising:

A write cache for caching data received to be written to the lower-level table object (col. 17, lines 62-64).

Regarding on claim 29, Lei teaches a computer data signal embodied in a carrier wave by a computing system and encoding a computer program for executing a computer process providing access to requested configuration information through a first level table object including first table-oriented interface having a first table-oriented method, the computer program comprising:

Receiving a call to the first table-oriented method in the first level table object (the query issued against a database object) (col. 21, lines 55-56);

Intercepting the call (detecting, within the database server, that the query is issued against a database object, prior the data server executing said query, invoking a policy function associated with said database object, a policy function associated with said database object, said policy function creating a modified query by selectively adding zero or more predicates to said query based on a policy associated with said database object) (the examiner interprets the upon the detecting the query, the instruction intercept and modify the query by employing policy function) (col. 21, lines 57-61);

Providing supplement logic that, provides domain specific logic that corresponds to the first table-oriented method and that is operable to modifying the execution of the call (prior the data server executing said query, invoking a policy function associated with said database object, a policy function associated with said database object, said policy function creating a modified query by selectively adding zero or more predicates to said query based on a policy associated with said database object) (col. 21, lines 57-61); and

Delegating the call to a corresponding table-oriented method of a lower-level table object to which the first level table object is bound, if the first level table object depends on the lower-level table object to complete service the call (the policy function that is bound to a table is invoked when a query accesses data in the table, regardless of the access path used by the query. For example, a particular query may retrieve data through a first view, where the first view retrieves data through second view, where the second view retrieves data from table t) (col. 15, lines 23-28).

Regarding on claim 30, Lei teaches the computer data signal of claim 29 wherein the first level table object is instantiated in accordance with a input parameter to present a table of the requested configuration data (receive the query access the t table) (col. 14, lines 6-7).

Regarding on claim 31, Lei teaches the computer signal of claim 29 wherein the computer process further comprises:

Delegating the call to a corresponding table-oriented method of another lower-level table object to which first level object is also bound, if the first level table object depends on the other lower-level table object to complete service the call (col. 15, lines 23-33).

Regarding on claim 32, Lei teaches the computer signal of claim 31 wherein the computer process further comprises:

Referencing a mapping lookup table to determine which lower-level table objects are delegated the table-oriented method call (col. 15, lines 23-32).

Claim 33 is rejected under the same reason as to claim 1, and the one or more synthesizing operation or a triggering operation to a call is the same modifying the query based on the detecting the query (col. 21, lines 55-62).

Regarding on claim 34, Lei teaches a computer program storage medium of claim 33, wherein the logic component module further provides one of a delegation operation (col. 15, lines 23-28).

Regarding on claim 35, Lei teaches the computer program storage medium of claim 34, wherein the operation for executing a logic component module comprises:

Intercepting the call to the first table-oriented method from a caller, the call being associated with a first coordinate in a logic level table presented to the caller by the first level table object (col. 15, lines 23-33); and

Mapping the first coordinate to a second coordinate in a lower-level table presented to the first level table object by the lower-level table object (col. 15, lines 23-32).

Regarding on claim 36, Lei teaches the computer program storage medium of claim 34 wherein the operation for executing a logic component module comprises:

Delegating the call to a corresponding table-oriented method of a lower-level table object to which the first table object is bound, if the first level table object depends on the lower-level table object to completely service the call (col. 15, lines 23-33).

Regarding on claim 37, Lei teaches the computer program storage medium of claim 36 wherein the computer process further comprises:

Storing a pointer to the lower-level table object usable to access to a lower-level table-oriented method of the lower-level table object (col. 15, lines 23-32).

Regarding on claim 38, Lei teaches the computer storage medium of claim 36 wherein the delegating operation further comprises:

Delegating the call to a corresponding table-oriented method of another lower-level table object to which the first level table object is also bound, if the first level object depend on the other lower-level table object to completely service the call (col. 15, lines 23-33).

Regarding on claim 39, Lei teaches the computer program storage medium of claim 33 wherein the operation for executing a logic component module comprises:

Intercepting the call of the first table-oriented method from a caller, the call being associated with a first coordinate in a logic level table presented to the caller by the table-oriented interface and having no corresponding coordinate in a lower-level presented by the lower-level table object (col. 15, lines 23-32);

Synthesizing data to provides synthesized data associated with the first coordinate in the logic level table (same modifying the query) (col. 21, lines 55-62); and

Returning the synthesized data to the caller (col. 21, lines 55-62);

Regarding on claim 40, Lei teaches the computer program storage medium of claim 39 wherein the operation for synthesizing data comprises:

Accessing lower-level data from at least a second coordinate in the lower-level table (col. 15, lines 232); and

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Determining the synthesized data based on the lower-level data (col. 21, lines 55-62).

Regarding on claim 41, Lei teaches the computer program storage medium of claim 33 wherein the operation for executing a logic component module comprises:

Triggering a operation external to the first level table object and the lower-level table object (col. 16, lines 6-20).

Regarding on claim 42, Lei teaches the computer program storage medium of claim 41 wherein the operation for triggering an operation comprises:

Triggering a customer activation to provide external activation processing (col. 16, lines 6-20).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Lei et al. (US. Patent No. 6,487,552 B1) in view of Monroe et al. (US. Patent No. 5,581,765).

Regarding on claim 3, Lei does not explicitly teaches the delegating operation comprises: replacing in a vtable an address to the first table-oriented method in the first level table object with an address to the corresponding table-oriented method of the lower-level table object. However, Monroe teaches "when a user attempts to use the invalid local object class, the system detects a segment fault, which is then used to

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initiate the "lazy update" of unresolved addresses by replacing part (Q) 76 with the corrected part (A) 72 value from the mapping table 84" (col. 8, lines 30-35). This suggests the replacing the vtable with corrected address. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Lei's system to include replacing the corrected addresses as taught by Monroe in order to utilize the replacing address to locate the object in the lower level to answer the user query.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:


Commissioner of Patents and Trademarks  
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

(703) 872-9306 [Official Communication]

Baoquoc N. To

Feb 19, 2005

  
JEAN M. CORRIELUS  
PRIMARY EXAMINER